

**METHODS AND APPARATUS  
FOR CONTENT DELIVERY VIA APPLICATION  
LEVEL MULTICAST WITH MINIMUM COMMUNICATION DELAY**

**ABSTRACT**

5           A method for constructing an overlay multicast tree to deliver data from a source  
to an identified group of nodes is provided in which a plurality of nodes are identified and  
mapped into multidimensional Euclidean space. A geometric region is constructing  
having a size that is the minimum size necessary to contain the source and all the nodes.  
Once constructed, a tree is created beginning at the source and including all of the nodes  
10   within the geometric region.